



SMART SOLAR SOLUTION

OSWAL SOLAR MODULES PRODUCT CATALOG



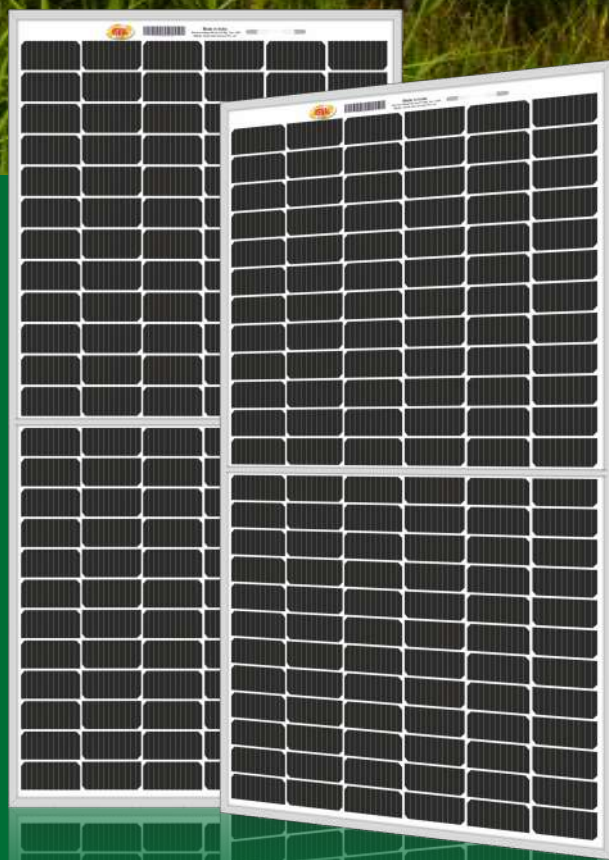


INTRO

Oswal Solar Structure is a pioneer in the field of manufacturing company, which encompasses in Solar PV modules. Entrenched in December 2023, Oswal Solar Structure dedicated to revolutionizing the renewable energy sector through the production of high-quality, durable, and efficient solar panels. At Oswal Solar Structure, we understand the need of the hour for transforming into a clean energy source and reduce dependency on the fossil fuels. Our Solar PV modules adopts the power of the sun to generate clean, renewable energy, which offers not only environmentally friendly but also cost-effective solutions for residential, commercial, and industrial applications as well.

We aim to collaborate in smart & intelligent ways bringing together the talents that yield the best possible results which are effective harness in the energy sector. Our Solar systems are suitable for a wide range of uses, including large-scale of commercial projects and residential rooftops. Oswal focuses on 100% quality and developing new heights with stable performance. Our dedicated team is committed to deliver the top quality power solutions that ensure uninterrupted power supply, offering peace of mind during outages.

Changing the face of India.



Certifications

CERTIFICATE

This is to certify that the
QUALITY MANAGEMENT SYSTEMS
of
OSWAL SOLAR STRUCTURE PRIVATE LIMITED
Opp. DD International Pvt. Ltd. Link Road,
Village Kutail, Karnal-132037, Haryana, India

has been assessed and found to be in conformance to the requirements of
ISO 9001:2015
This certificate is valid for the following activity:

Manufacturing and Assembly of Solar Photo Voltaic Modules/ Panels,
Solar Power Generating Systems (Covering Off Grid, On Grid & Hybrid Solar Power Plants),
Solar Pumping Systems

Certificate No.: IQ-23120401
Date of initial Registration 04-12-2023
Date of this Certificate 04-12-2023
Certificate Expiry 03-12-2024*
Recertification Due 03-12-2026

Auth Sign

*Registration is subject to the system being continually maintained to the above standard under regular surveillance.
To check the certification validity please visit- <https://www.lafcertsearch.org/> or www.ispicert.com

Indraprastha SystemCerts Pvt. Ltd.
Accredited by EGAC, A Member of International Accreditation Forum
For updated information of Certification, visit- www.ispicert.com, or E Mail- info@ispicert.com
201, Janta Tower-3, A-1, Janki Park, New Delhi-110058, India, Ph- +91 9890 477 831

CERTIFICATE

This is to certify that the
ENVIRONMENTAL MANAGEMENT SYSTEMS
of
OSWAL SOLAR STRUCTURE PRIVATE LIMITED
Opp. DD International Pvt. Ltd. Link Road,
Village Kutail, Karnal-132037, Haryana, India

has been assessed and found to be in conformance to the requirements of
ISO 14001:2015
This certificate is valid for the following activity:

Manufacturing and Assembly of Solar Photo Voltaic Modules/ Panels,
Solar Power Generating Systems (Covering Off Grid, On Grid & Hybrid Solar Power Plants),
Solar Pumping Systems

Certificate No.: IE-23120401
Date of initial Registration 04-12-2023
Date of this Certificate 04-12-2023
Certificate Expiry 03-12-2024*
Recertification Due 03-12-2026

Auth Sign

*Registration is subject to the system being continually maintained to the above standard under regular surveillance.
To check the certification validity please visit- <https://www.lafcertsearch.org/> or www.ispicert.com

Indraprastha SystemCerts Pvt. Ltd.
Accredited by EGAC, A Member of International Accreditation Forum
For updated information of Certification, visit- www.ispicert.com, or E Mail- info@ispicert.com
201, Janta Tower-3, A-1, Janki Park, New Delhi-110058, India, Ph- +91 9890 477 831

CERTIFICATE

This is to certify that the
OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEMS
of
OSWAL SOLAR STRUCTURE PRIVATE LIMITED
Opp. DD International Pvt. Ltd. Link Road,
Village Kutail, Karnal-132037, Haryana, India

has been assessed and found to be in conformance to the requirements of
ISO 45001:2018
This certificate is valid for the following activity:

Manufacturing and Assembly of Solar Photo Voltaic Modules/ Panels,
Solar Power Generating Systems (Covering Off Grid, On Grid & Hybrid Solar Power Plants),
Solar Pumping Systems

Certificate No.: IO-23120401
Date of initial Registration 04-12-2023
Date of this Certificate 04-12-2023
Certificate Expiry 03-12-2024*
Recertification Due 03-12-2026

Auth Sign

*Registration is subject to the system being continually maintained to the above standard under regular surveillance.
To check the certification validity please visit- <https://www.lafcertsearch.org/> or www.ispicert.com

Indraprastha SystemCerts Pvt. Ltd.
Accredited by EGAC, A Member of International Accreditation Forum
For updated information of Certification, visit- www.ispicert.com, or E Mail- info@ispicert.com
201, Janta Tower-3, A-1, Janki Park, New Delhi-110058, India, Ph- +91 9890 477 831

भारतीय मानक ब्यूरो
BUREAU OF INDIAN STANDARDS

Our Ref: Registration/CRS 2023-4578/R-91013935 Date: 26-Sep-2023

Subject : Licence Document

Manufacturing Unit:	M/s Oswal Solar Structure Pvt Ltd., OPP DD INTERNATIONAL PVT LTD LINK ROAD VILLAGE KUTAIL, KARNAL HARYANA,INDIA-132037 oswalsolarstructure@gmail.com 9729997156
---------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Dear Sir,

1. With reference to your Application, we are pleased to inform you that it has been decided to grant you licence as per details given below :

Product Category:	CRYSTALLINE SILICON TERRESTRIAL PHOTOVOLTAIC (PV) MODULES (SI wafer based)
Product Name:	Crystalline Silicon Terrestrial Photovoltaic (PV) modules (SI wafer based)
IS NO :	IS 14286 : 2010/ IEC 61215 : 2005, IS/IEC 61730 (PART 1) : 2004 & IS/IEC 61730 (PART 2) : 2004
Brand (As Declared by Manufacturer):	OSWAL
Model:	[Brand -> OSWAL Models -> OSWAL250MPD72, OSWAL250MPN72, OSWAL255MPD72, OSWAL255MPN72, OSWAL260MPD72, OSWAL260MPN72, OSWAL265MPD72, OSWAL265MPN72, OSWAL270MPD72, OSWAL270MPN72, OSWAL275MPD72, OSWAL275MPN72, OSWAL280MPD96, OSWAL280MPN96, OSWAL330MPD96, OSWAL330MPN96, OSWAL335MPD96, OSWAL335MPN96, OSWAL340MPD96, OSWAL340MPN96, OSWAL350MPD96, OSWAL350MPN96, OSWAL355MPD96, OSWAL355MPN96, OSWAL360MPD96, OSWAL360MPN96, OSWAL365MPD96, OSWAL365MPN96, OSWAL370MPD108, OSWAL370MPN108, OSWAL380MPD108, OSWAL380MPN108, OSWAL385MPD108, OSWAL385MPN108, OSWAL390MPD108, OSWAL390MPN108, OSWAL400MPD108, OSWAL400MPN108, OSWAL405MPD108, OSWAL405MPN108, OSWAL410MPD108, OSWAL410MPN108, OSWAL415MPD108, OSWAL415MPN108, OSWAL420MPD108, OSWAL420MPN108, OSWAL425MPD108, OSWAL425MPN108, OSWAL430MPD108, OSWAL430MPN108, OSWAL435MPD108, OSWAL435MPN108, OSWAL440MPD108, OSWAL440MPN108, OSWAL445MPD108, OSWAL445MPN108, OSWAL450MPD108, OSWAL450MPN108, OSWAL455MPD108, OSWAL455MPN108, OSWAL460MPD108, OSWAL460MPN108, OSWAL465MPD108, OSWAL465MPN108, OSWAL470MPD108, OSWAL470MPN108, OSWAL475MPD108, OSWAL475MPN108, OSWAL480MPD108, OSWAL480MPN108, OSWAL485MPD108, OSWAL485MPN108, OSWAL490MPD108, OSWAL490MPN108, OSWAL495MPD108, OSWAL495MPN108, OSWAL500MPD108, OSWAL500MPN108, OSWAL505MPD108, OSWAL505MPN108, OSWAL510MPD108, OSWAL510MPN108, OSWAL515MPD108, OSWAL515MPN108, OSWAL520MPD108, OSWAL520MPN108, OSWAL525MPD108, OSWAL525MPN108, OSWAL530MPD108, OSWAL530MPN108, OSWAL535MPD108, OSWAL535MPN108, OSWAL540MPD108, OSWAL540MPN108, OSWAL545MPD108, OSWAL545MPN108, OSWAL550MPD108, OSWAL550MPN108, OSWAL555MPD108, OSWAL555MPN108, OSWAL560MPD108, OSWAL560MPN108, OSWAL565MPD108, OSWAL565MPN108, OSWAL570MPD108, OSWAL570MPN108, OSWAL575MPD108, OSWAL575MPN108, OSWAL580MPD108, OSWAL580MPN108, OSWAL585MPD108, OSWAL585MPN108, OSWAL590MPD108, OSWAL590MPN108, OSWAL595MPD108, OSWAL595MPN108]

Factory Address :
OPP DD INTERNATIONAL PVT LTD LINK ROAD, VILLAGE KUTAIL, KARNAL
HARYANA,INDIA-132037

- The licence is being granted for your unit located at the address and for the brand and models mentioned at serial no 1 above.
- The number assigned to this Licence is _____ and is valid upto _____ The Licence Number should invariably be referred to in your future correspondence.
- The rights and privileges under the licence shall not be exercised by any other factory / organization at any other location. This licence is non transferable in the event of shifting of the manufacturing machinery from the registered premises to some other place use of the licence Number shall be stopped and BIS shall be informed.
- The licensee shall comply with the provisions of the Act, rules and regulations framed thereunder and as amended from time to time.
- The licensee shall follow the guidelines for the use of Standard Mark and labeling requirements as per Annex-I.
- The licensee shall not use the licence in any manner which contravenes the provisions of Act, rules and regulations framed thereunder and as amended from time to time.
- Upon expiry of validity, stoppage or suspension or cancellation of licence, you shall discontinue forthwith the self declaration of conformity to the relevant Indian Standard(s) and withdraw all promotional and advertising matter which contains any reference thereto.
- For renewal of licence, the licensee shall have to apply to BIS three months in advance before expiration of the licence and application form for renewal is available on BIS website.
- The licence is non transferable. Kindly acknowledge receipt of this letter.

Thanking you,

Our Solar Modules

**MONO PERC HALF-CUT
OSWAL 500 Wp - 555 Wp**
Mono (Non-DCR)

**MONO PERC HALF-CUT
OSWAL 500 Wp - 555 Wp**
Mono (DCR)

**MONO PERC HALF-CUT
OSWAL 500 Wp - 555 Wp**
Mono Bifacial (Non-DCR)

**MONO PERC HALF-CUT
OSWAL 500Wp - 555Wp**
Mono Bifacial (DCR)

Our Services



9*6 Customer care access support operation



Single point of support for customer



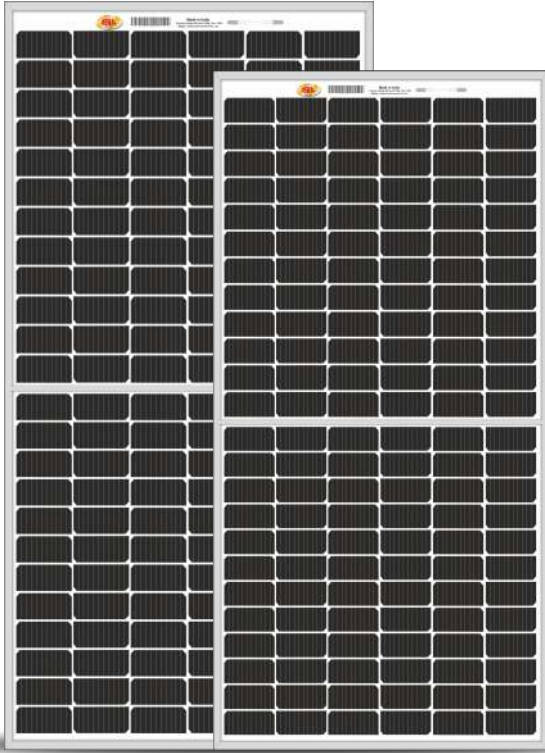
Technical support



Always ready to support



Onsite Service Solutions



OSWAL SOLAR MODULES MONO PERC HALF-CUT 500 Wp - 555 Wp

Mono (Non-DCR) Series

THE INDUSTRY'S BENCHMARK

Oswal Solar is an internationally renowned leading solar energy cost effective befitting solutions provider having core competency in high efficiency PV module manufacturing and providing wide range EPC solutions. PV modules are the best in class in terms of power output and long-term reliability.

PRODUCT CERTIFICATES



MADE IN INDIA

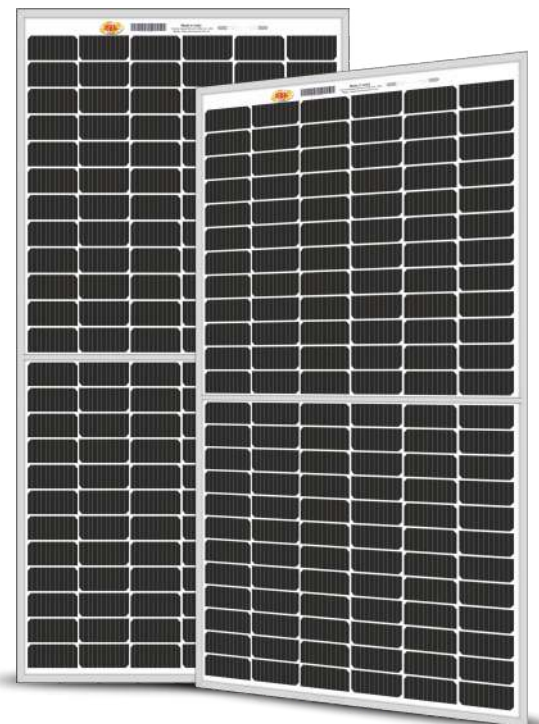
30 YEAR
 30 Years Warranty for linear performance

12 YEAR
 Product warranty on materials and workmanship

PRODUCT | KEY FEATURES

OSWAL SOLAR

-  Anti-Reflective (AR) coated glass to enhance solar energy
-  Excellent module efficiency with Passivated Emitter Rear Cell (PERC) to achieve higher energy conversion efficiency
-  Positive power tolerance with current binning to prevent mismatch losses
-  Pre-&Post electroluminescence (EL) High-Resolution Camera to detect hidden defects in the structure of PV Panels such as cell cracks and diode failures
-  IP68 Junction Box ensures long-term endurance, even in harsh environmental conditions
-  Hi-Pot test requires to assess the stress on electrical equipment for safety and quality considerations
-  Multi-Busbar (MBB) half-cut cell technology brings stronger resistance to shade and lower risk of hot spot



TECHNICAL DATA

PERFORMANCE UNDER STANDARD TEST CONDITIONS (STC) (Irradiance of 1000 W/m², spectrum AM 1.5, and cell temperature of 25°C)

Model Number	OSWAL540MPN144	OSWAL545MPN144	OSWAL550MPN144
Nominal Maximum Power (Pmax)	540W	545W	550W
Power Tolerance	<-----	0 ~ +5 W	----->
Optimum Operating Voltage (Vmp)	41.86 V	42.01 V	42.14 V
Optimum Operating Current (Imp)	12.91 A	12.98 A	13.07 A
Open Circuit Voltage (Voc)	49.78 V	49.91 V	50.06 V
Short Circuit Current (Isc)	13.53 A	13.59 A	13.65 A
Module Efficiency	20.94 %	23.13 %	21.32 %
Fill Factor	80.17 %	80.35 %	80.48 %

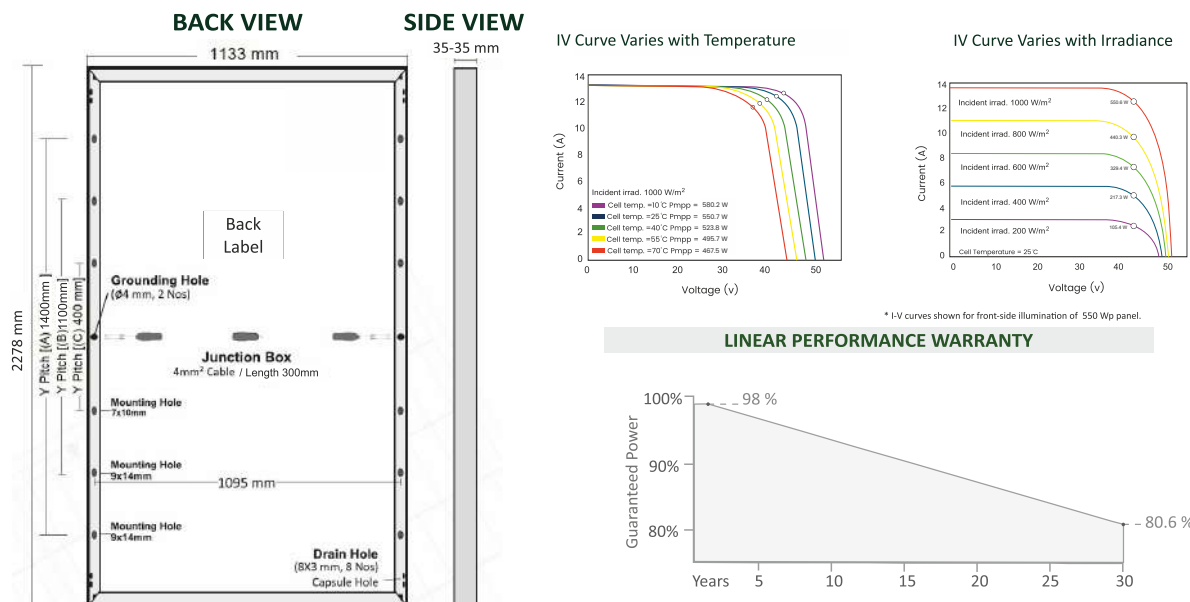
Note: Power measurement uncertainty: <±3%

PERFORMANCE UNDER NOCT (NOCT irradiances of 800 W/m², ambient temperature of 20°C, Wind speed 1m/s, Average NOCT = 45.25°C)

Maximum Power (Pmax)	406.7 W	410.4W	412.2 W
Optimum Operating Voltage (Vmp)	38.5 V	38.7 V	38.94 V
Optimum Operating Current (Imp)	10.56 V	10.59 V	10.62 V
Open Circuit Voltage (Voc)	46.5 V	46.7 V	46.83 V
Short Circuit Current (Isc)	11.16 A	11.22 A	11.15 A

Mechanical Specifications

Dimensions (L x W x T in mm)	2278 x 1133 x 35
Weight (Kg)	28.6
Cell Type / No. Of cell	Mono PERC Half-Cut/144 Cell (12*6, 12*6)
Frame	Silver Anodized Aluminum Alloy (6063, Temper T6, Silver Colour)
Front Cover	ARC Coated Low-Iron Tempered Glass (3.2 mm Thick)
Encapsulate	Ethylene Vinyl Acetate (EVA) Sheet - PID free and UV Resistant
Back Sheet	Fluoro-polymer Based Composite Film / Polymer Based Composite Film
Junction Box	Split Junction Box (3 units with bypass diode) - Weatherproof (IP68), MC4 Compatible
Cable	4 sq mm, 300 mm Length
Application Class Rating	Class A
Safety Class Rating	Class II
Mechanical Load Test (as per IEC & UL)	5400 Pa-front, 2400 Pa-back
Mounting Holes Pitch (Y)-mm	[A] 1400, [B] 1100, [C] 400
Mounting Holes Pitch (X)-mm	1095



*All dimensions are in mm with ± 2 mm tolerance

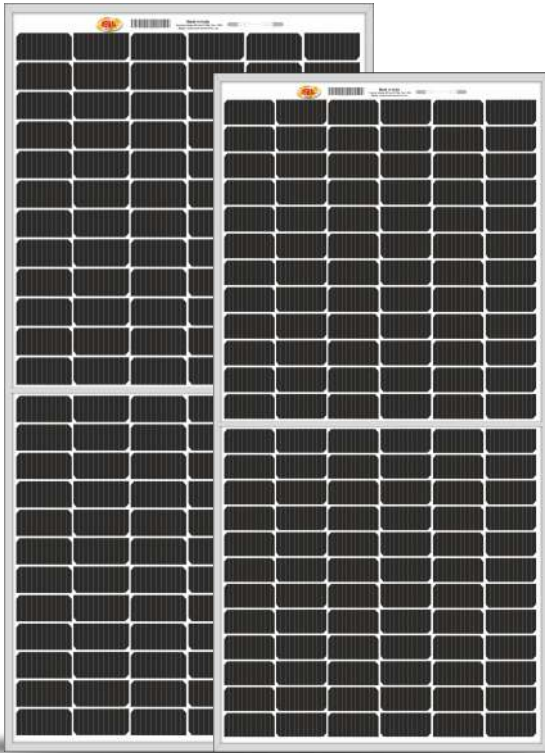
graphics shown here in above are reference purpose only

MAXIMUM OPERATING CONDITIONS	TEMPERATURE COEFFICIENTS	STACKING STANDARD	
		19FT	32FT
Operating Temperature: -40°C to +85°C	Current α(Isc) : 0.0271 %/ C	No. of Modules	192 Nos
Maximum System Voltage: 1500V	Voltage β(Voc) : -0.2355 %/ C	No of Pallets	8 Pallets
Maximum Series Fuse Rating: 25A	Power γ(Pmax) : -0.3164 %/ C	Modules per Pallet / Weight	24 Nos/730 Kgs.
		Pallet dimensions	2320*1000*1275
			27 Nos/820 Kgs.
			2320*1130*1275

Caution: Please read the safety and installation instructions before using this product.

Warranty: Linear power warranty for 30 years, with degradation of up to 2% in the first year and 0.6% per year from year 2 to year 30. Please read the Oswal warranty documents thoroughly.

Disclaimer: Specifications included in this datasheet are subject to change without prior notice due to ongoing innovation in product development and R&D activities. OSWAL SOLAR reserves the right to make any adjustments to the information described here. The data contained in this specification do not represent the performance of an individual module. T&C apply.



OSWAL SOLAR MODULES MONO PERC HALF-CUT 500 Wp - 555 Wp

Mono (DCR) Series

THE INDUSTRY'S BENCHMARK

Oswal Solar is an internationally renowned leading solar energy cost effective befitting solutions provider having core competency in high efficiency PV module manufacturing and providing wide range EPC solutions. PV modules are the best in class in terms of power output and long-term reliability.

PRODUCT CERTIFICATES



MADE IN INDIA

30 YEAR 30 Years Warranty for linear performance

12 YEAR Product warranty on materials and workmanship

PRODUCT | KEY FEATURES

OSWAL SOLAR



Anti-Reflective (AR) coated glass to enhance solar energy



Excellent module efficiency with Passivated Emitter Rear Cell (PERC) to achieve higher energy conversion efficiency



Positive power tolerance with current binning to prevent mismatch losses



Pre-&Post electroluminescence (EL) High-Resolution Camera to detect hidden defects in the structure of PV Panels such as cell cracks and diode failures



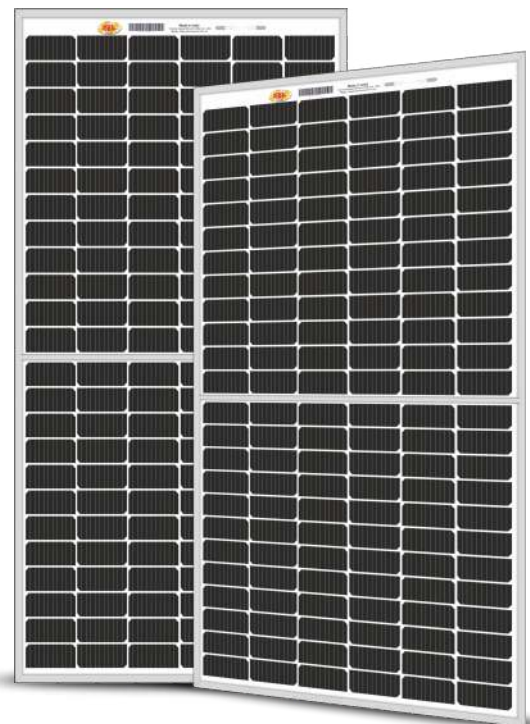
IP68 Junction Box ensures long-term endurance, even in harsh environmental conditions



Hi-Pot test requires to assess the stress on electrical equipment for safety and quality considerations



Multi-Busbar (MBB) half-cut cell technology brings stronger resistance to shade and lower risk of hot spot



TECHNICAL DATA

PERFORMANCE UNDER STANDARD TEST CONDITIONS (STC) (Irradiance of 1000 W/m², spectrum AM 1.5, and cell temperature of 25°C)

Model Number	OSWAL540MP144	OSWAL545MP144	OSWAL550MP144
Nominal Maximum Power (Pmax)	540W	545W	550W
Power Tolerance	<-----	0 ~ +5 W	----->
Optimum Operating Voltage (Vmp)	41.86 V	42.01 V	42.14 V
Optimum Operating Current (Imp)	12.91 A	12.98 A	13.07 A
Open Circuit Voltage (Voc)	49.78 V	49.91 V	50.06 V
Short Circuit Current (Isc)	13.53 A	13.59 A	13.65 A
Module Efficiency	20.94 %	23.13 %	21.32 %
Fill Factor	80.17 %	80.35 %	80.48 %

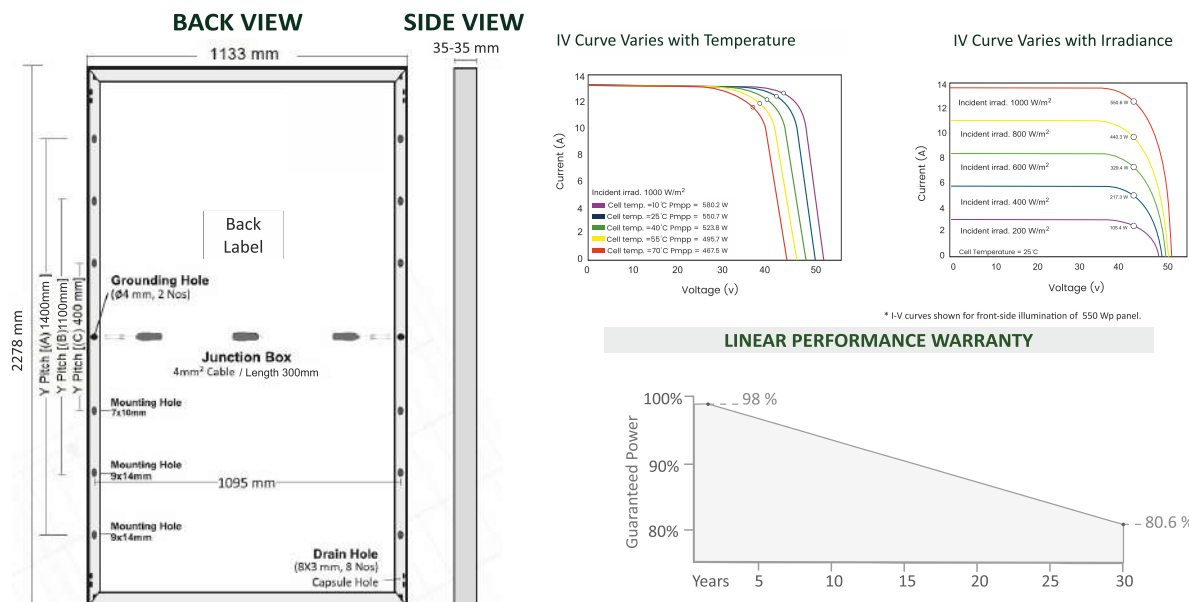
Note: Power measurement uncertainty: <±3%

PERFORMANCE UNDER NOCT (NOCT irradiances of 800 W/m², ambient temperature of 20°C, Wind speed 1m/s, Average NOCT = 45.25°C)

Maximum Power (Pmax)	406.7 W	410.4W	412.2 W
Optimum Operating Voltage (Vmp)	38.5 V	38.7 V	38.94 V
Optimum Operating Current (Imp)	10.56 V	10.59 V	10.62 V
Open Circuit Voltage (Voc)	46.5 V	46.7 V	46.83 V
Short Circuit Current (Isc)	11.16 A	11.22 A	11.15 A

Mechanical Specifications

Dimensions (L x W x T in mm)	2278 x 1133 x 35
Weight (Kg)	28.6
Cell Type / No. Of cell	Mono PERC Half-Cut/144 Cell (12*6, 12*6)
Frame	Silver Anodized Aluminum Alloy (6063, Temper T6, Silver Colour)
Front Cover	ARC Coated Low-Iron Tempered Glass (3.2 mm Thick)
Encapsulate	Ethylene Vinyl Acetate (EVA) Sheet - PID free and UV Resistant
Back Sheet	Fluoro-polymer Based Composite Film / Polymer Based Composite Film
Junction Box	Split Junction Box (3 units with bypass diode) - Weatherproof (IP68), MC4 Compatible
Cable	4 sq mm, 300 mm Length
Application Class Rating	Class A
Safety Class Rating	Class II
Mechanical Load Test (as per IEC & UL)	5400 Pa-front, 2400 Pa-back
Mounting Holes Pitch (Y)-mm	[A] 1400, [B] 1100, [C] 400
Mounting Holes Pitch (X)-mm	1095



*All dimensions are in mm with ± 2 mm tolerance

graphics shown here in above are reference purpose only

MAXIMUM OPERATING CONDITIONS	TEMPERATURE COEFFICIENTS	STACKING STANDARD	19FT	32FT
Operating Temperature: -40°C to +85°C	Current α(Isc) : 0.0271 %/ C	No. of Modules	192 Nos	432Nos
Maximum System Voltage: 1500V	Voltage β(Voc) : -0.2355 %/ C	No of Pallets	8 Pallets	16 Pallets
Maximum Series Fuse Rating: 25A	Power γ(Pmax) : -0.3164 %/ C	Modules per Pallet / Weight	24 Nos/730 Kgs.	27 Nos/820 Kgs.
		Pallet dimensions	2320*1000*1275	2320*1130*1275

Caution: Please read the safety and installation instructions before using this product.

Warranty: Linear power warranty for 30 years, with degradation of up to 2% in the first year and 0.6% per year from year 2 to year 30. Please read the Oswal warranty documents thoroughly.

Disclaimer: Specifications included in this datasheet are subject to change without prior notice due to ongoing innovation in product development and R&D activities. OSWAL SOLAR reserves the right to make any adjustments to the information described here. The data contained in this specification do not represent the performance of an individual module. T&C apply.

OSWAL SOLAR MODULES MONO PERC HALF-CUT 500 Wp - 555 Wp

Mono Bifacial (Non-DCR) Series

THE INDUSTRY'S BENCHMARK

Oswal Solar is an internationally renowned leading solar energy cost effective befitting solutions provider having core competency in high efficiency PV module manufacturing and providing wide range EPC solutions. PV modules are the best in class in terms of power output and long-term reliability.

PRODUCT CERTIFICATES



MADE IN INDIA

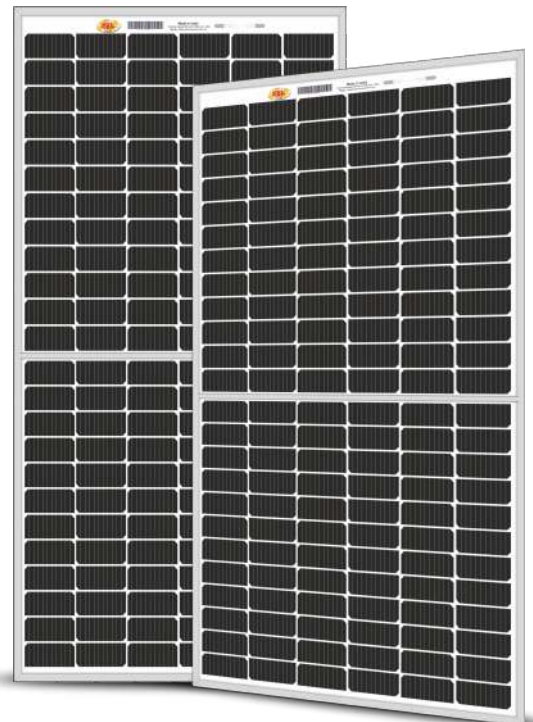
30 YEAR 30 Years Warranty for linear performance

12 YEAR Product warranty on materials and workmanship

PRODUCT | KEY FEATURES

OSWAL SOLAR

-  Anti-Reflective (AR) coated glass to enhance solar energy
-  Excellent module efficiency with Passivated Emitter Rear Cell (PERC) to achieve higher energy conversion efficiency
-  Positive power tolerance with current binning to prevent mismatch losses
-  Pre-&Post electroluminescence (EL) High-Resolution Camera to detect hidden defects in the structure of PV Panels such as cell cracks and diode failures
-  IP68 Junction Box ensures long-term endurance, even in harsh environmental conditions
-  Hi-Pot test requires to assess the stress on electrical equipment for safety and quality considerations
-  Multi-Busbar (MBB) half-cut cell technology brings stronger resistance to shade and lower risk of hot spot



TECHNICAL DATA

ELECTRICAL PERFORMANCE [Note: Power tolerance: 0 ~ +4.99 W. Power measurement uncertainty: $\pm 3\%$. Average value of NOCT: 44.28 \pm 2°C]

ELECTRICAL CHARACTERISTICS*	OSWAL540MPN144TB		OSWAL545MPN144TB		OSWAL550MPN144TB	
	STC	NOCT	STC	NOCT	STC	NOCT
Nominal Maximum Power (Pmax)	540 W	406.7 W	545 W	410.4 W	550 W	412.20 W
Optimum Operating Voltage (Vmp)	41.86 V	38.50 V	42.01 V	38.70 V	42.14 V	38.94 V
Optimum Operating Current (Imp)	12.91 A	10.56 A	12.98 A	10.59 A	13.07 A	10.62 A
Open Circuit Voltage (Voc)	49.78 V	46.50 V	49.91 V	46.70 V	50.06 V	46.83 V
Short Circuit Current (Isc)	13.53 A	11.16 A	13.59 A	11.22 A	13.65 A	11.15 A
Module Efficiency	20.94 %		21.13 %		21.32 %	
Fill Factor	80.17 %		80.35 %		80.48 %	

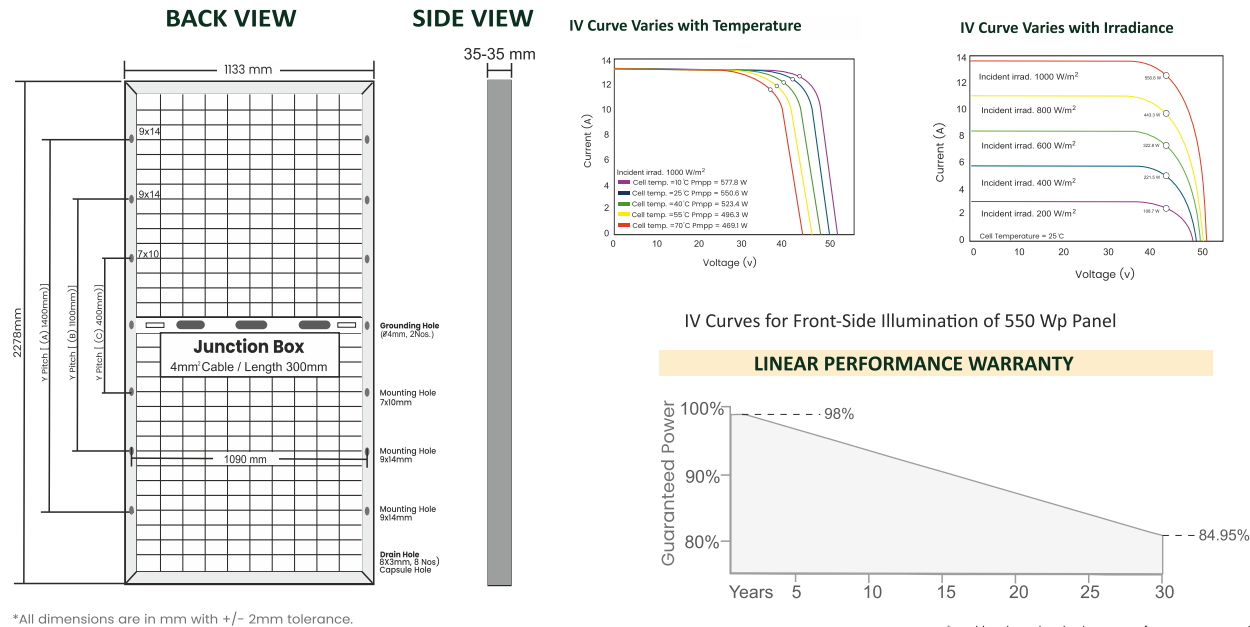
BIFACIAL OUTPUT – BACKSIDE POWER GAIN @ STC* [Bifaciality Factor: 75% \pm 10%]

[Note: The bifacial gain depends on the power plant design and conditions. Electrical component ratings should be selected based on the actual bifacial gain at the site (module currents indicated below).]

Bifaciality (%)	Parameter	OSWAL540MPN144TB	OSWAL545MPN144TB	OSWAL550MPN144TB
		Value	Value	Value
15%	Nominal Maximum Power (Pmax)	621 W	627 W	632 W
	Module Short-Circuit Current / Efficiency	24.12 %	24.35 %	24.56 %
20%	Nominal Maximum Power (Pmax)	648 W	654 W	660 W
	Module Short-Circuit Current / Efficiency	25.17 %	25.41 %	25.63 %
25%	Nominal Maximum Power (Pmax)	675 W	681 W	687 W
	Module Short-Circuit Current / Efficiency	26.22 %	26.46 %	26.70 %

Mechanical Specifications

Dimensions (L x W x T in mm)	2278 x 1133 x 35
Weight (Kg)	28.6
Cell Type / No. Of cell	Mono PERC Half-Cut Bifacial /144 Cell (12*6, 12*6)
Frame	Silver Anodized Aluminum Alloy (6063, Temper T6, Silver Colour)
Front Cover	ARC Coated Low-Iron Tempered Glass (3.2 mm Thick)
Encapsulate	Ethylene Vinyl Acetate (EVA) Sheet - PID free and UV Resistant
Back Sheet	Fluoro-polymer Based Composite Film / Polymer Based Composite Film
Junction Box	Split Junction Box (3 units with bypass diode) - Weatherproof (IP68), MC4 Compatible
Cable	4 sq mm, 300 mm Length
Application Class Rating	Class A
Safety Class Rating	Class II
Mechanical Load Test (as per IEC & UL)	5400 Pa-front, 2400 Pa-back
Mounting Holes Pitch (Y)-mm	[A] 1400, [B] 1100, [C] 400
Mounting Holes Pitch (X)-mm	1095



*All dimensions are in mm with +/- 2mm tolerance.

*graphics shown herein above are reference purpose only.

MAXIMUM OPERATING CONDITIONS	TEMPERATURE COEFFICIENT	STACKING STANDARD		
		32FT	40FT	
Operating Temperature :	-40°C to +85°C	No. of Modules :	434	620
Maximum System Voltage :	1500V	No of Pallets :	14	20
Maximum Series Fuse Rating :	25A	Modules per Pallet / Weight :	31 Nos/1070 Kg	31 Nos/1070 Kg
		Pallet dimensions:	2320*1130*1275	2320*1130*1275

Caution: Please read the safety and installation instructions before using this product.

Warranty: Linear power warranty for 30 years, with degradation of up to 2% in the first year and 0.6% per year from year 2 to year 30. Please read the Oswal warranty documents thoroughly.

Disclaimer: Specifications included in this datasheet are subject to change without prior notice due to ongoing innovation in product development and R&D activities. OSWAL SOLAR reserves the right to make any adjustments to the information described here. The data contained in this specification do not represent the performance of an individual module. T&C apply.

OSWAL SOLAR MODULES

MONO PERC HALF-CUT

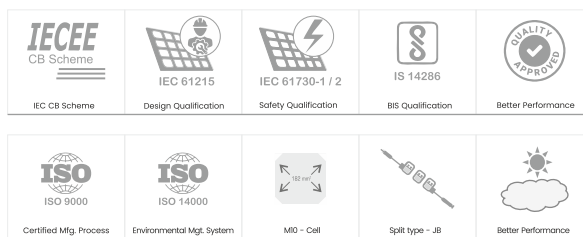
500 Wp - 555 Wp

Mono Bifacial (DCR) Series

THE INDUSTRY'S BENCHMARK

Oswal Solar is an internationally renowned leading solar energy cost effective befitting solutions provider having core competency in high efficiency PV module manufacturing and providing wide range EPC solutions. PV modules are the best in class in terms of power output and long-term reliability.

PRODUCT CERTIFICATES



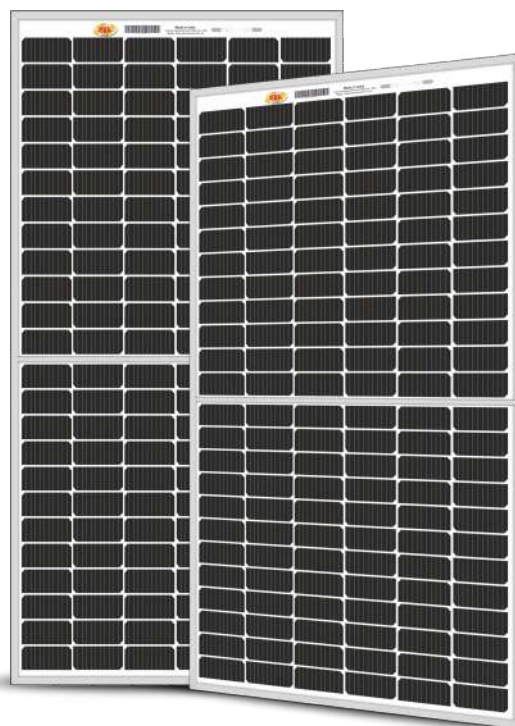
MADE IN INDIA

30 30 Years Warranty for
linear performance

12 Product warranty on
materials and workmanship

PRODUCT | KEY FEATURES

-  Anti-Reflective (AR) coated glass to enhance solar energy
-  Excellent module efficiency with Passivated Emitter Rear Cell (PERC) to achieve higher energy conversion efficiency
-  Positive power tolerance with current binning to prevent mismatch losses
-  Pre- & Post electroluminescence (EL) High-Resolution Camera to detect hidden defects in the structure of PV Panels such as cell cracks and diode failures
-  IP68 Junction Box ensures long-term endurance, even in harsh environmental conditions
-  Hi-Pot test requires to assess the stress on electrical equipment for safety and quality considerations
-  Multi-Busbar (MBB) half-cut cell technology brings stronger resistance to shade and lower risk of hot spot



OSWAL SOLAR

TECHNICAL DATA

ELECTRICAL PERFORMANCE [Note: Power tolerance: 0 ~ +4.99 W. Power measurement uncertainty: $\pm 3\%$. Average value of NOCT: 44.28 $\pm 2^{\circ}\text{C}$]

ELECTRICAL CHARACTERISTICS*	OSWAL540MP144TB		OSWAL545MP144TB		OSWAL550MP144TB	
	STC	NOCT	STC	NOCT	STC	NOCT
Nominal Maximum Power (Pmax)	540 W	406.7 W	545 W	410.4 W	550 W	412.20 W
Optimum Operating Voltage (Vmp)	41.86 V	38.50 V	42.01 V	38.70 V	42.14 V	38.94 V
Optimum Operating Current (Imp)	12.91 A	10.56 A	12.98 A	10.59 A	13.07 A	10.62 A
Open Circuit Voltage (Voc)	49.78 V	46.50 V	49.91 V	46.70 V	50.06 V	46.83 V
Short Circuit Current (Isc)	13.53 A	11.16 A	13.59 A	11.22 A	13.65 A	11.15 A
Module Efficiency	20.94 %		21.13 %		21.32 %	
Fill Factor	80.17 %		80.35 %		80.48 %	

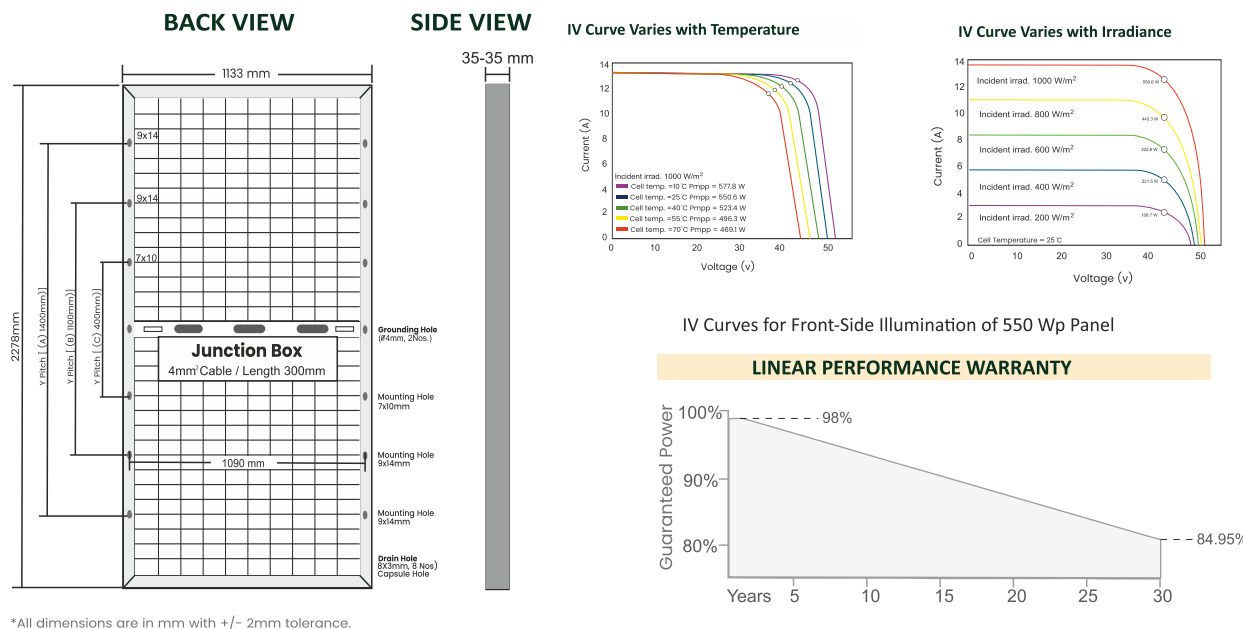
BIFACIAL OUTPUT – BACKSIDE POWER GAIN @ STC* [Bifaciality Factor: 75% \pm 10%]

[Note: The bifacial gain depends on the power plant design and conditions. Electrical component ratings should be selected based on the actual bifacial gain at the site (module currents indicated below).]

		OSWAL540MP144TB			OSWAL545MP144TB			OSWAL550MP144TB		
		STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC
15%	Nominal Maximum Power (Pmax)	621 W			627 W			632 W		
	Module Short-Circuit Current / Efficiency	24.12 %			24.35 %			24.56 %		
20%	Nominal Maximum Power (Pmax)	648 W			654 W			660 W		
	Module Short-Circuit Current / Efficiency	25.17 %			25.41 %			25.63 %		
25%	Nominal Maximum Power (Pmax)	675 W			681 W			687 W		
	Module Short-Circuit Current / Efficiency	26.22 %			26.46 %			26.70 %		

Mechanical Specifications

Dimensions (L x W x T in mm)	2278 x 1133 x 35
Weight (Kg)	28.6
Cell Type / No. Of cell	Mono PERC Half-Cut Bifacial /144 Cell (12*6, 12*6)
Frame	Silver Anodized Aluminum Alloy (6063, Temper T6, Silver Colour)
Front Cover	ARC Coated Low-Iron Tempered Glass (3.2 mm Thick)
Encapsulate	Ethylene Vinyl Acetate (EVA) Sheet - PID free and UV Resistant
Back Sheet	Fluoro-polymer Based Composite Film / Polymer Based Composite Film
Junction Box	Split Junction Box (3 units with bypass diode) - Weatherproof (IP68), MC4 Compatible
Cable	4 sq mm, 300 mm Length
Application Class Rating	Class A
Safety Class Rating	Class II
Mechanical Load Test (as per IEC & UL)	5400 Pa-front, 2400 Pa-back
Mounting Holes Pitch (Y)-mm	[A] 1400, [B] 1100, [C] 400
Mounting Holes Pitch (X)-mm	1095



*All dimensions are in mm with ± 2 mm tolerance.

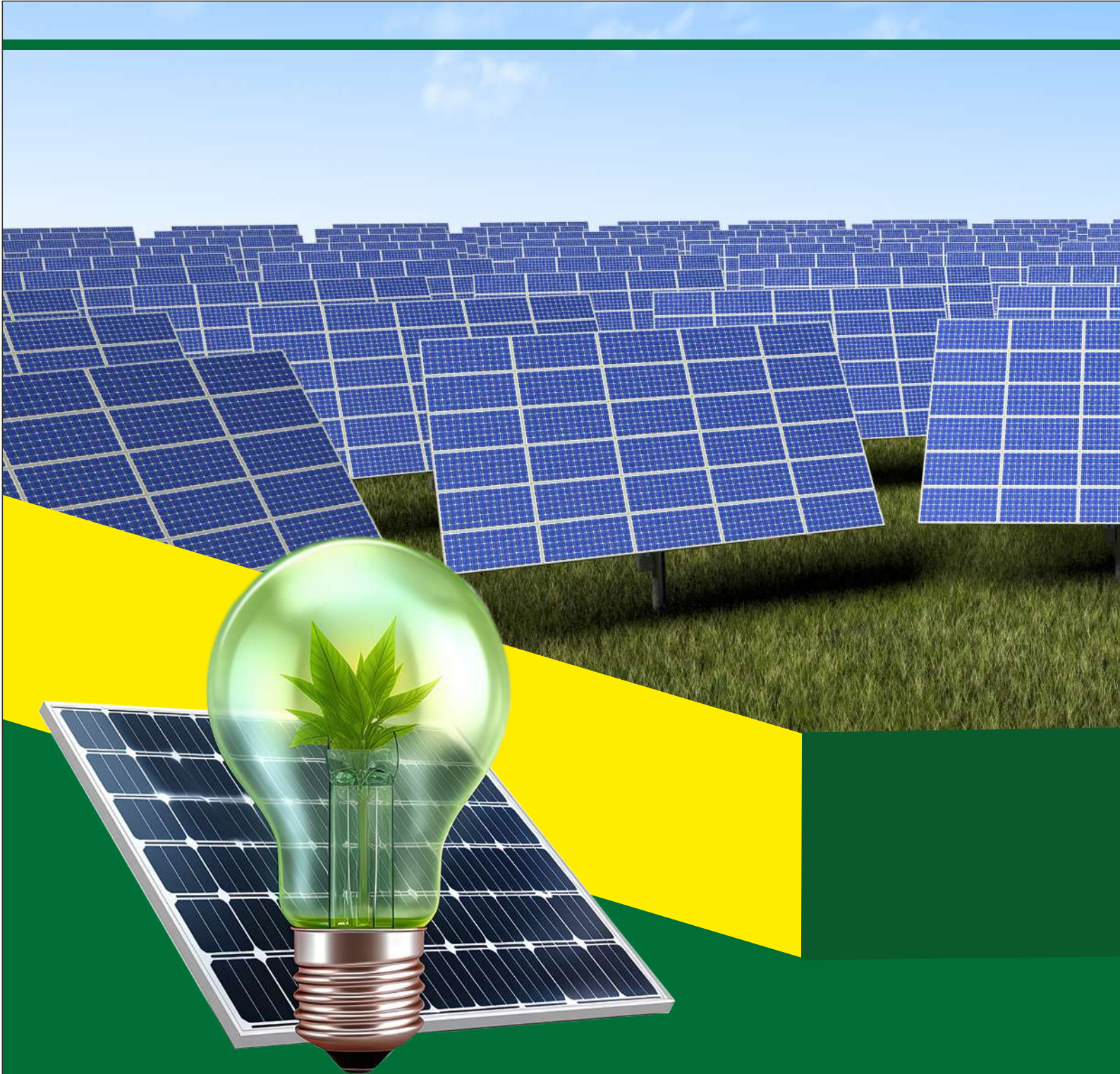
*graphics shown herein above are reference purpose only.

MAXIMUM OPERATING CONDITIONS		TEMPERATURE COEFFICIENT		STACKING STANDARD	
				32FT	40FT
Operating Temperature :	-40°C to +85°C	Current α (Isc) :	0.0286%/°C	No. of Modules :	434
Maximum System Voltage :	1500V	Voltage β (Voc) :	-0.2488%/°C	No of Pallets :	14
Maximum Series Fuse Rating :	25A	Power γ (Pmax) :	-0.3290%/°C	Modules per Pallet / Weight :	31 Nos/1070 Kg
				Pallet dimensions :	2320*1130*1275

Caution: Please read the safety and installation instructions before using this product.

Warranty: Linear power warranty for 30 years, with degradation of up to 2% in the first year and 0.6% per year from year 2 to year 30. Please read the Oswal warranty documents thoroughly.

Disclaimer: Specifications included in this datasheet are subject to change without prior notice due to ongoing innovation in product development and R&D activities. OSWAL SOLAR reserves the right to make any adjustments to the information described here. The data contained in this specification do not represent the performance of an individual module. T&C apply.



Solar Energy Solutions



Industrial
Solar



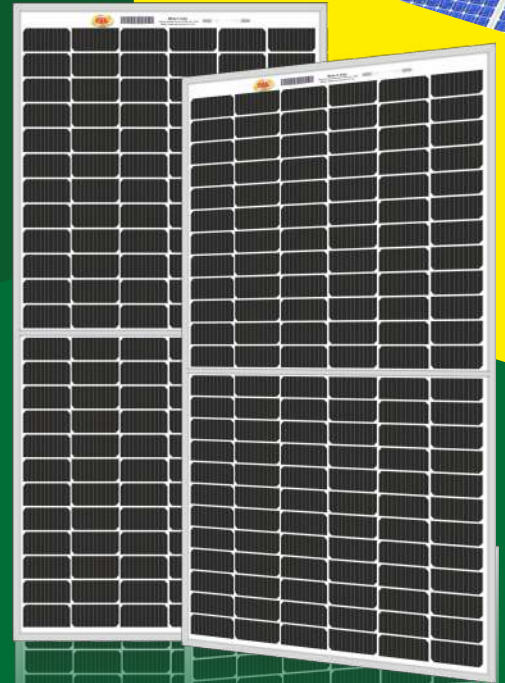
Residential
Rooftop Solar



Solar R&D
Support System



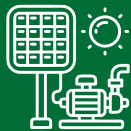
Solar Business
Models



Solar makes your life better



AC Solar Plants



Agriculture Solar (Water Pumps)



Agricultural Solutions (VFD-based Flour Mill, Oil expellers, and Others)



Commercial Solar



OSWAL

RENEWABLE ENERGY

Greener | Cleaner | Smarter
True Partner !



RR Solar Power Solutions

Padma complex, Opp DCC bank, Hyderabad road, Bidar, Karnataka-585403

+91 9448038803 www.rrpowersolutions.com raghavendraenterprisesforsolar@gmail.com